Call for Papers

IEEE Journal of Emerging and Selected Topics in Power Electronics

Special Issue on Miniaturized Power Electronics Systems, 2013

Scheduled Publication Time: November 2013

With the development of circuit topologies, control strategies, passive devices and semiconductor devices, the power electronics field has entered into a new era. One significant feature this new era brings to us is miniaturization of power electronics systems. The first aspect of miniaturization is small size, such as power supply on chip (PwrSoC) where a complete power supply can be made with silicon process and therefore is very small. Power Supply in Package (PSiP) is an intermediate step in this development. The second aspect of miniaturization is low power processing, such as energy harvesting, medical application, where input power is generally limited. The third aspect of miniaturization is the new technology that can achieve much higher power density (3 to 10 times) as compared those with existing technology, such as very high switching frequency (10MHz to 200MHz). The emerging power electronics technologies in three aspects are the major focus of this special issue.

Prospective authors are invited to submit original contributions, or survey papers or tutorials, for review for publication in this special issue on Miniaturized Power Electronics Systems. Papers with applications in nature are particularly welcome. Topics of interest include, but are not limited to:

- Power Supply on Chip (PwrSoC)
- Power Supply in Package (PSiP)
- 10MHz – 200MHz switching frequency technologies
- Very high power density power supplies
- Advanced control technologies for reducing sizes of power supplies
- Wide Band gap devices and its application
- New power architecture for high efficiency small size power conversion
- High energy density inductor technologies
- High energy density capacitor technologies
- Energy Harvesting and its power electronic circuits
- Power electronics in low power computing
- Power electronics in medical application

All manuscripts must be submitted through Manuscript Central at http://mc.manuscriptcentral.com/jestpe-ieee. Submissions must be clearly marked “Special Issue on Miniaturized Power Electronics Systems, 2013” on the cover page. When uploading your paper, please select your manuscript type “Special Issue.” Refer to http://www.pels.org for general information about electronic submission through Manuscript Central. Manuscripts submitted for the special issue will be reviewed separately and will be handled by the guest editorial board noted below.

Deadline for Submission of Manuscript: July 1, 2013

Guest Editor: Yan-Fei Liu, Queen’s University (yanfe.liu@queensu.ca)

Guest Associate Editors:
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Proposed Timeline:
- April 1, 2013 – Call for Papers to IEEE JESTPE Editorial Office
- July 1, 2013 – Manuscripts Submission Deadline
- September 1, 2013 – Final Acceptance Notification
- October 1, 2013 – Manuscripts Forwarded to IEEE for Publication
- November 1, 2013 – Special Issue Appears in IEEE JESTPE